In the claims:

1. (currently amended) A method for performing a plurality of filter operations on a data packet using an instruction, comprising:

receiving an instruction to filter at least one data packet;

retrieving a filter result based on the received instruction; and

performing at least two of a plurality of filter operations on the at least one data packet in accordance with the retrieved filter result.

2. (original) The method of claim 1, further comprising processing the at least one data packet based on a determination of the performed filter operations.

3. (original) The method of claim 1, wherein the instruction comprises a set of data bits.

4. (original) The method of claim 3, wherein the set of data bits of the instruction comprises 32 data bits.

5. (original) The method of claim 4, wherein the filter operations comprise 32 filter operations.

6. (original) The method of claim 3, wherein the set of data bits of the instruction comprises 64 data bits.

7. (original) The method of claim 6, wherein the filter operations comprise 64 filter operations.

8. (original) The method of claim 2, wherein the processing of the data packet comprises classifying the data packet.

9. (original) The method of claim 1, wherein the data packet comprises one of SONET, ATM, Ethernet, HDLC, PPP, IP, TCP, and UDP data packet..

10. (original) The method of claim 1, wherein the at least one data packet comprises a plurality of data fields.

11. (original) The method of claim 10, wherein the performing of the filter operations on the at least one data packet comprises performing the filter operations on at least one of the data fields of the at least one data packet.

12. (original) The method of claim 3, wherein the filter operations correspond to the data bits of the instruction.

13. (original) The method of claim 1, wherein the retrieving the filter result based on the received instruction comprises a radix search.

14. (currently amended) An apparatus for performing a plurality of filter operations on a data packet using an instruction, comprising:

a memory configured to store a filter result, the filter result being retrieved from the memory based on an instruction, the instruction being configured to filter at least one data packet; and

a processor coupled to the memory, the processor being configured to perform at least two of a plurality of filter operations on the at least one data packet in accordance with the filter result.

15. (original) The apparatus of claim 14, wherein the processor is configured to process the at least one data packet based on a determination of the filter operations.

16. (original) The apparatus of claim 14, wherein the instruction comprises a set of data bits.

17. (original) The apparatus of claim 16, wherein the set of data bits of the instruction comprises 32 data bits.

18. (original) The apparatus of claim 17, wherein the filter operations comprise 32 filter operations.

19. (original) The apparatus of claim 16, wherein the set of data bits of the instruction comprises 64 data bits.

20. (original) The apparatus of claim 19, wherein the filter operations comprise 64 filter operations.

21. (original) The apparatus of claim 15, wherein processing the at least one data packet comprises classifying the at least one data packet.

22. (original) The apparatus of claim 14, wherein the at least one data packet comprises one of SONET, ATM, Ethernet, HDLC, PPP, IP, TCP, and UDP data packet.

23. (original) The apparatus of claim 14, wherein the at least one data packet comprises a plurality of data fields.

24. (original) The apparatus of claim 23, wherein the performance of the filter operations on the at least one data packet comprises the performance of the filter operations on at least one of the data fields of the at least one data packet.

25. (original) The apparatus of claim 16, wherein the filter operations correspond to the data bits of the instruction.

26. (original) The apparatus of claim 14, wherein retrieving the filter result based on the received instruction comprises a radix search.

27. (currently amended) A computer-readable medium encoded with a program for a computer, the program comprising:

receiving an instruction to filter at least one data packet;

retrieving a filter result based on the received instruction; and

performing at least two of a plurality of filter operations on the at least one data packet in accordance with the retrieved filter result.

28. (original) The computer-readable medium of claim 27, further comprising processing the at least one data packet based on a determination of the performed filter operations.

29. (original) The computer-readable medium of claim 27, wherein the instruction comprises a set of data bits.

30. (original) The computer-readable medium of claim 29, wherein the set of data bits of the instruction comprises 32 data bits.

31. (original) The computer-readable medium of claim 30, wherein the filter operations comprise 32 filter operations.

32. (original) The computer-readable medium of claim 29, wherein the set of data bits of the instruction comprises 64 data bits.

33. (original) The computer-readable medium of claim 29, wherein the filter operations comprise 64 filter operations.

34. (original) The computer-readable medium of claim 28, wherein the processing of the data packet comprises classifying the data packet.

35. (original) The computer-readable medium of claim 27, wherein the data packet comprises one of SONET, ATM, Ethernet, HDLC, PPP, IP, TCP, and UDP data packet.

36. (original) The computer-readable medium of claim 27, wherein the at least one data packet comprises a plurality of data fields.

37. (original) The computer-readable medium of claim 36, wherein the performing of the filter operations on the at least one data packet comprises performing the filter operations on at least one of the data fields of the at least one data packet.

38. (original) The computer-readable medium of claim 29, wherein the filter operations correspond to the data bits of the instruction.

39. (original) The computer-readable medium of claim 27, wherein the retrieving the filter result based on the received instruction comprises a radix search.